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ROOT CROPS SECTOR NOTES

January 2020

To be read in conjunction with FEMAS 2019 Standard

For minimum analysis requirements refer to the FEMAS Calculator

Feed Materials FEMAS Assurance Scheme

FEMAS Sector Note No. 11 – Root Crops

These Sector Notes apply to businesses producing root crop products for use in or as animal feed, including: sugar beet products, potato and other edible root crop by-products or downgrades.

These Notes are not exhaustive, and are intended to assist in the application of the corresponding requirements of the FEMAS Standard and are not to be considered in isolation.

Section 1 of these Sector Notes includes definitions of specific relevance to this sector.

Section 2 of these Sector Notes includes those additional requirements of the FEMAS Scheme specific to this sector and with which Participants **must** comply in order to achieve certification under the FEMAS Scheme.

Section 3 of these Sector Notes includes additional guidance (shown in italics) specific to this sector, which will assist Participants in interpreting the FEMAS Standard for their sector.

1 Definitions

Root Crops	Tubers and roots of plants processed for use in human food or animal feed. These include: sugar beet, manioc (tapioca), sweet potato and potato.

2 Additional Sector-Specific Requirements

F 1.1	**Feed Specification**	Where root crops have been fried in cooking oil prior to supply as animal feed, participants must ensure that the oil content is managed carefully and declared to prospective clients (as excessive levels of dietary oil will be detrimental to ruminant livestock).
G 1.1	**Premises**	Where whole root crops, intermediate products or feed are stored outside, Participants must be able to demonstrate that no additional hazards are created by this practice. Among those issues to be considered are: • Spoilage through mould activity • The development of toxins through mould activity • Ingress by pests and their potential incorporation into feed products • Contamination with pathogens through contact with bird and other animal droppings and urine • Contamination through vehicle movements and by litter, mud and ground water

3 Sector-Specific Guidance

B 1.7	***HACCP and Feed Safety Risk Assessment***	*Sector-specific potential hazards include but are not limited to:* • *The presence of heavy metals in minerals and clays used in the process* • *The presence of Dioxins in minerals and clays used in the process* *Where chemical treatments are used on stored root crops to control sprouting, mould development or maturation, Participants should be able to demonstrate that residues from these products will have no adverse effect upon the feed.*
C 2.2	***Selection and Approval of Raw Materials***	*Sector-specific potential hazards in raw materials include but are not limited to:* • *Natural contamination of soil by heavy metals* • *Presence of pollutants, such as Dioxin and heavy metals dispersed from nearby industrial incineration and other industrial activities* • *The presence of animal protein as a result of spreading processed animal protein on the land* • *The presence of accumulated pathogens and heavy metals through the use of human sewage and animal excrement as fertiliser* • *The presence of other potentially harmful extraneous matter occurring in the growing medium* • *The presence of animals in root crops collected from field storage* • *Toxins produced by moulds known to attack the root crop species being processed*
H 2	***Bulk Intake***	*Where vehicles transporting Root Crops are not sheeted, or otherwise covered, Participants should demonstrate that this will not lead to unacceptable hazards as a consequence.* *It is recognised that the carriage of Root Crops may result in the presence of soil inside load compartments and transport delivering raw materials will often be inherently 'dirty'. Nevertheless, Participants should ensure that this does not adversely affect feed safety.*